

RAIZ



Forest and Paper Research Institute

TECHNOLOGICAL
SCOUTING NEWSLETTER

October 2021

Highlights

- The packaging and biorefinery segments are the main subjects of this newsletter, from a new white-top kraftliner to commercial plant-based plastics.



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Services Provided by RAIZ Technological Scouting:

Technological Scouting Newsletter (monthly)

Technological Scouting On Demand (specific technological issues, upon request)

For further information please contact: mariana.oliveira@thenavigatorcompany.com

START-UP OF THE MONTH



Lactips is a French start-up which has developed water soluble and biodegradable thermoplastic pellets and films based on milk protein. The developed water-soluble packaging can be applied for the laundry, detergents, construction, textile, agriculture and single-use plastics areas. As demonstrated at page 5, the start-up now presents a new “Plastic Free Paper”.

Read more ➤ [Lactips](#)



PACKAGING



Cision

BillerudKorsnäs: relaunches coated white-top kraftliner for litho-laminated packaging

BillerudKorsnäs is now launching an upgraded version of Pure Supreme, a well-established premium white-top kraftliner, optimized for offset printing. It is produced at BillerudKorsnäs' KM7, the world's most modern board machine, and the advanced technologies applied in KM7 have made possible to combine several valuable product properties, such as printability, strength, stiffness, appearance, consistency, and purity, into the new Pure Supreme product. Primary wood fibres in a 3-ply structure makes Pure Supreme strong, and a mid-layer of chemithermomechanical pulp (CTMP) and Kraft pulp provides bulk, stiffness, and stability to ensure high runnability.

Read more > [BillerudKorsnäs](#)

● Technological
● Product Development



Lactips

Lactips: “Plastic Free Paper”

Lactips, a French start-up, has developed a solution for paper or cardboard packaging which combines paper with the casein-based thermoplastic developed by Lactips. The Plastic Free Paper solution provides the oxygen, fat and mineral oil barriers that are essential for preserving food products and is fully compliant with food contact standards.

First two applications are available:

- replacing the sealable plastic layer for non-food packaging, such as mailing films, or food films for dry or fatty products (tea bags, confectionery, pet chews, etc.)
- replacing fluorinated substances (PFAs) for papers that need to be grease-proof (e.g. fast food packaging)

Read more > [Lactips](#)

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PACKAGING



Pulpac

Pulpac & OrganoClick: lab breakthrough in sustainable barrier

A consortium consisting of Pulpac, Nordic Barrier Coating and OrganoClick have been working on the development of radically new biobased and biodegradable materials and their application methods for enabling the integration of more environmentally friendly water and/or grease resistant barriers in dry molded processes. Not much information is available, but it seems that OrganoClick has developed a fiber modification technology for water and grease resistance barrier materials for Dry Molded Fiber developed by PulPac. The three companies have on the last couple of months conducted extensive tests on the sustainable barrier solutions with new application methods and materials that show very high potential for biodegradable and food-grade solutions for more complex applications. The companies state this is a lab level breakthrough and a further industrial development and validation is expected.

Read more > [Cision](#)

● Technological
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Celluforce

Celluforce: thin film packaging 100% recyclable

CelluForce has recently completed an industrial scale up trial on low-density polyethylene (LDPE) packaging film: 1 GSM of CelluForce NCC® was coated on a roll of the thermoplastic. In addition of increasing the oxygen and water vapor barrier properties of the LDPE to a comparable performance of today's market's most stringent needs, this high barrier LDPE/ CelluForce NCC® thin film has just received the certification that it is fully recyclable by TREX Company Inc., one of the largest recyclers of LDPE plastic film in North America.

Read more > [Celluforce](#)

● Technological
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New cellulose based products



Stora Enso

Stora Enso: new fluff pulp grade with lower carbon footprint

Stora Enso has developed NaturaFluff Eco, a new fluff pulp grade with a lower carbon footprint with applications in the production of hygiene products, such as baby diapers, incontinence pads and feminine care. NaturaFluff Eco is an oxygen-delignified fluff pulp, meaning that no bleaching chemicals are used in its production. Consequently, the fluff pulp has a natural beige colour and a roughly 30% lower carbon footprint in comparison to traditional fluff pulp, without compromising on product performance. Producers of absorbent hygiene products are now trialing the new material for use on consumer markets.

Read more > [Stora Enso](#)

● Technological
● Product Development

BIOREFINERY



UPM

UPM: BioMotion™ Renewable Functional Fillers

UPM has launched BioMotion™, renewable functional fillers (RFF) for replacing fossil-based carbon black and precipitated silica, the major functional fillers used in rubber and plastic products. UPM BioMotion™ will enable reducing rubber and plastic products CO₂ footprint and weight in numerous industries such as automotive, flooring or footwear. Mass production of RFF in UPM's biorefinery in Leuna is expected to ramp up during 2023, with UPM's patent-protected process using wood and side streams from sawmill operations to produce UPM BioMotion™ RFF and other biochemicals.

Read more > [UPM](#)

● Technological
● Product Development

BIOREFINERY



McDonald's

Essity and McDonald's: paper cups for toilet paper

Hygiene and health company Essity and McDonald's are working in a recycling project for converting used paper cups into Essity's Tork branded toilet paper. The pilot carried out showed that Essity can successfully use the paper cups, after they have been shredded, as raw material for some of their mills and turn them into the toilet paper. All collected paper cup waste from McDonald's sites in Germany will be recycled, reducing waste by an estimated 1,200 tons per year. This partnership will help McDonald's decrease its waste and carbon footprint while assisting Essity on fulfilling its own circular economy ambitions.

Read more > [Essity](#)

● Technological
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Coca-Cola

Coca-Cola and UPM: commercial plant-based plastic

Coca-Cola has collaborated with Changchun Meihe Science & Technology, a Chinese global licensor of biomass to chemicals technology, and with UPM for the first planned commercialization of a technology for converting biomass into plant-based monoethylene glycol (bMEG) for the production of plastic beverage bottles. The technology, which is co-owned and co-developed by Coca-Cola and Changchun Meihe, will be scaled to commercial quantities by UPM, at its new biorefinery currently being built in Leuna, Germany. The developed technology is characterized by removing the usual step of generating ethanol under the conversion process to produce plant-based MEG. It will use UPM's hardwood, taken from the sawmill and other wood industry side-streams, as a sugar source for producing bMEG.

Read more > [Coca-Cola](#)

● Technological
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INDUSTRY 4.0



Open Source Software: technological independence, competitiveness and innovation

The European Commission has published a study on the impact of Open Source Software (OSS) and Open Source Hardware (OSH) on the European economy, a study carried out by Fraunhofer ISI and the Open Forum Europe. The study estimates that OSS contributes between €65 to €95 billion to the European Union's Gross Domestic Product and promises significant growth opportunities for the region's digital economy. To achieve this, the EU must seek a transition by opening up its political and investment culture.

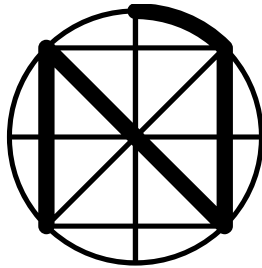
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RAIZ – Forest and Paper Research Institute

Quinta de S. Francisco, Apartado 15, 3801-501 Eixo

Tel: +351 234 920 130, Fax: +351 234 931 359

mariana.oliveira@thenavigatorcompany.com



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